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(54) Facsimile with user-selectable display language

(57) A facsimile (or other image processing) machine having an operating panel (8, fig 1) with a display (8e) for giving user guidance and showing machine status displays information in one of a plurality of languages selected by the user. Information messages to be displayed are stored in ROM and RAM (3, 4) in the plurality of languages available.

FIG. 6A

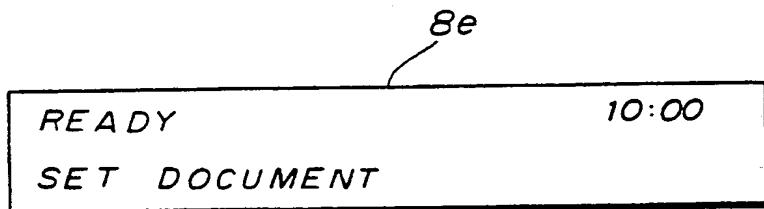
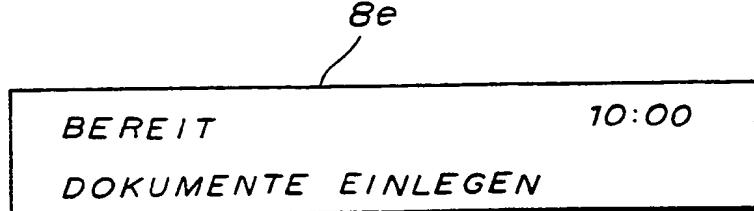
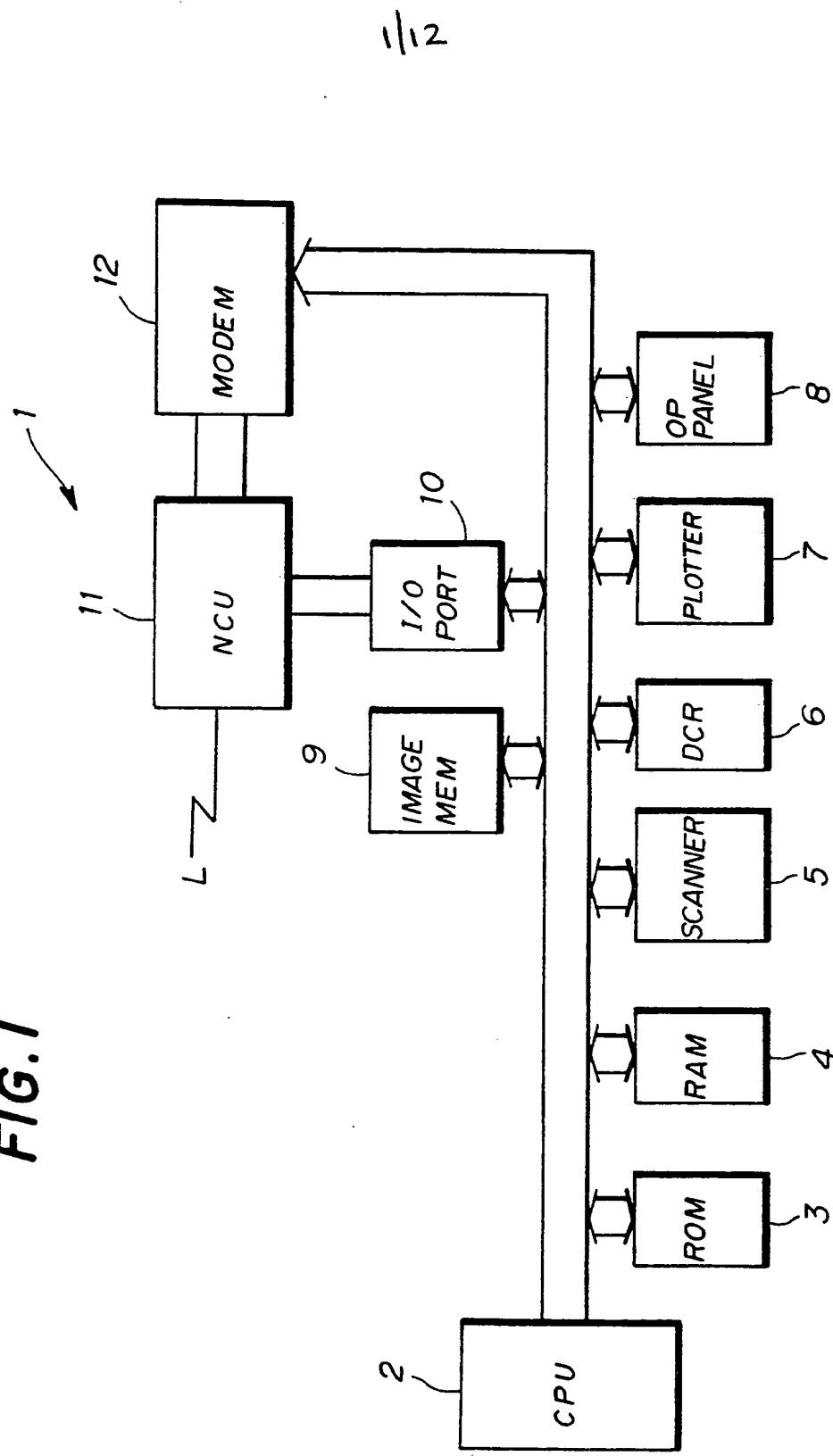


FIG. 6B



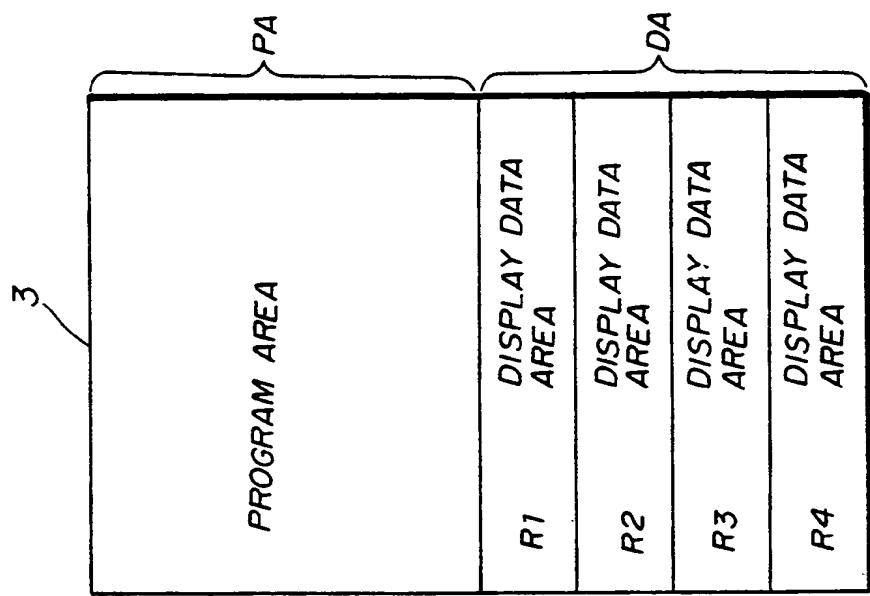
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*FIG. I*



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FIG. 2



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CA	0	0	0	0	0	0	1	R1
	0	0	0	0	0	1	0	R2
	0	0	0	0	0	1	1	R3
	0	0	0	0	1	0	0	R4

*FIG. 3A*

*FIG. 3B*

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FIG.4

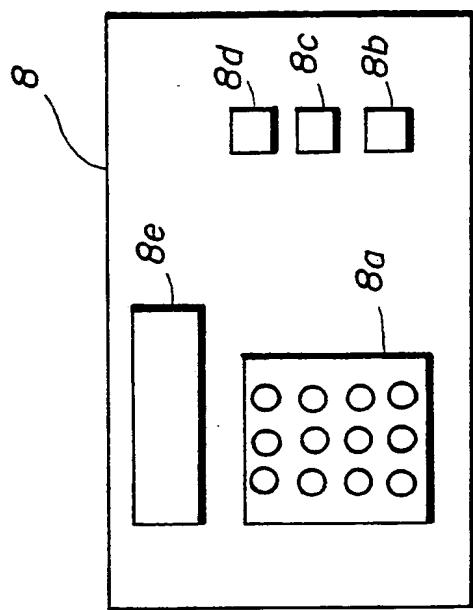
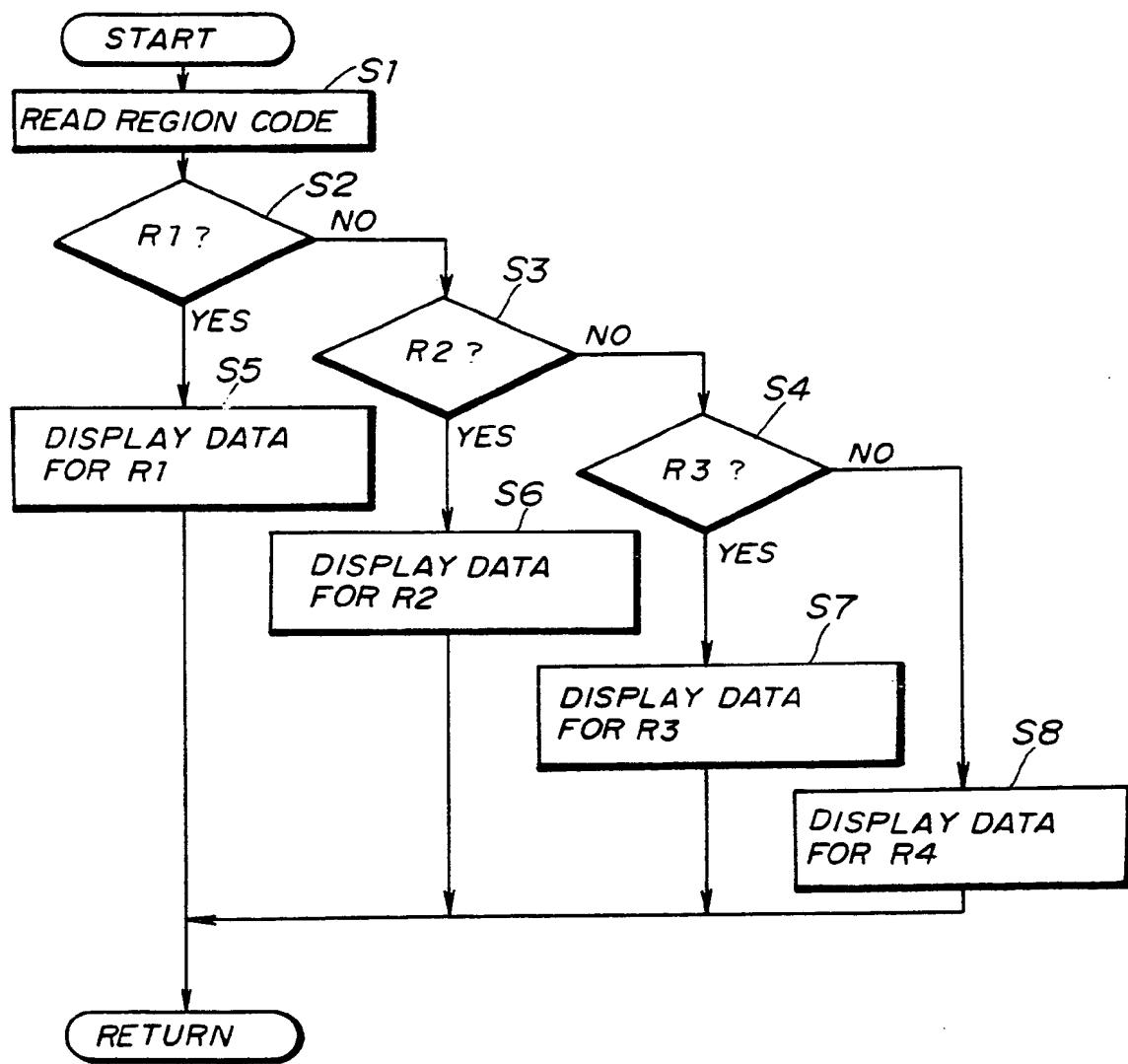
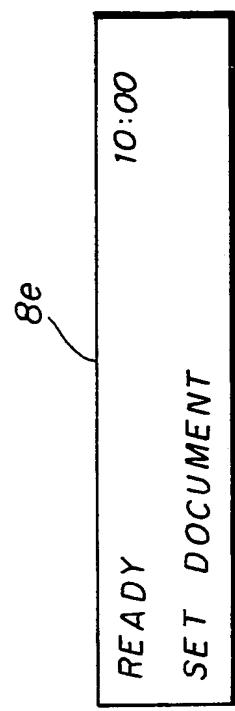


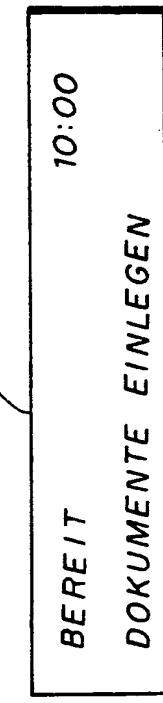
FIG. 5



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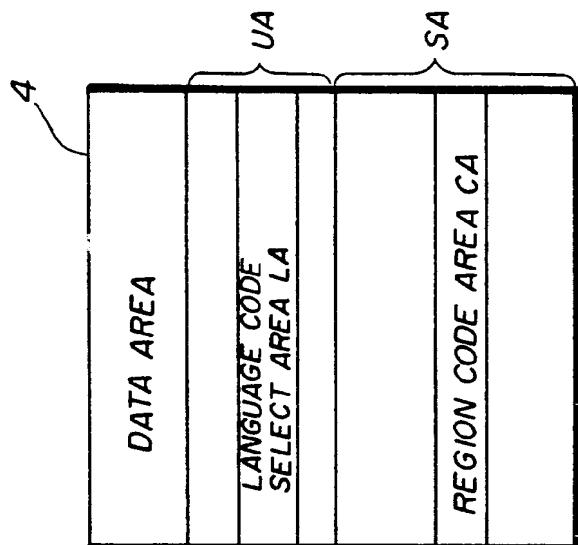
**FIG. 6A**



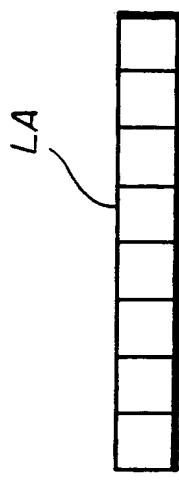
**FIG. 6B**

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FIG. 7



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**FIG. 8A**

	0	0	0	0	0	0	1	LANG 1	
	0	0	0	0	0	1	0	LANG 2	
	0	0	0	0	0	0	1	1	LANG 3
	0	0	0	0	1	0	0	0	LANG 4

**FIG. 8B**

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FIG. 9

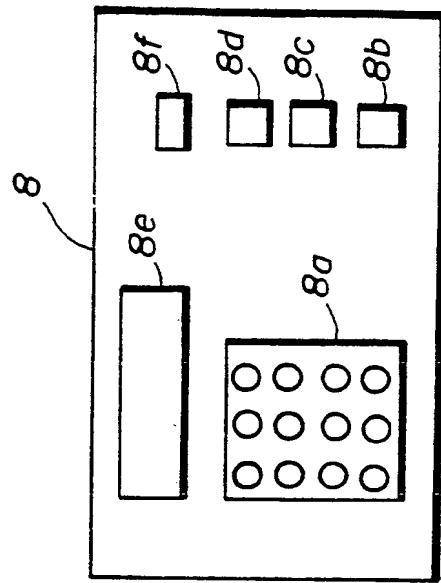
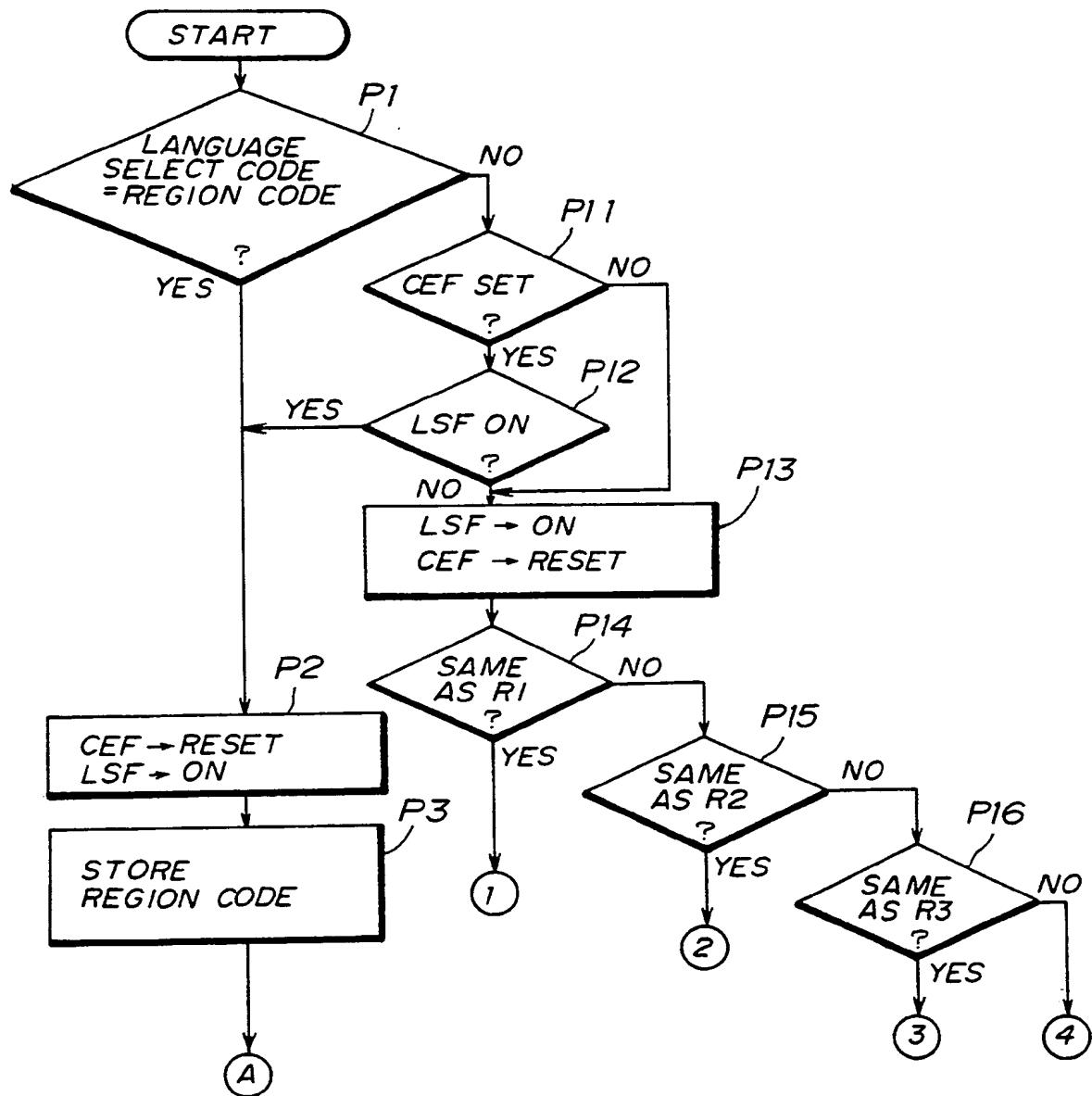
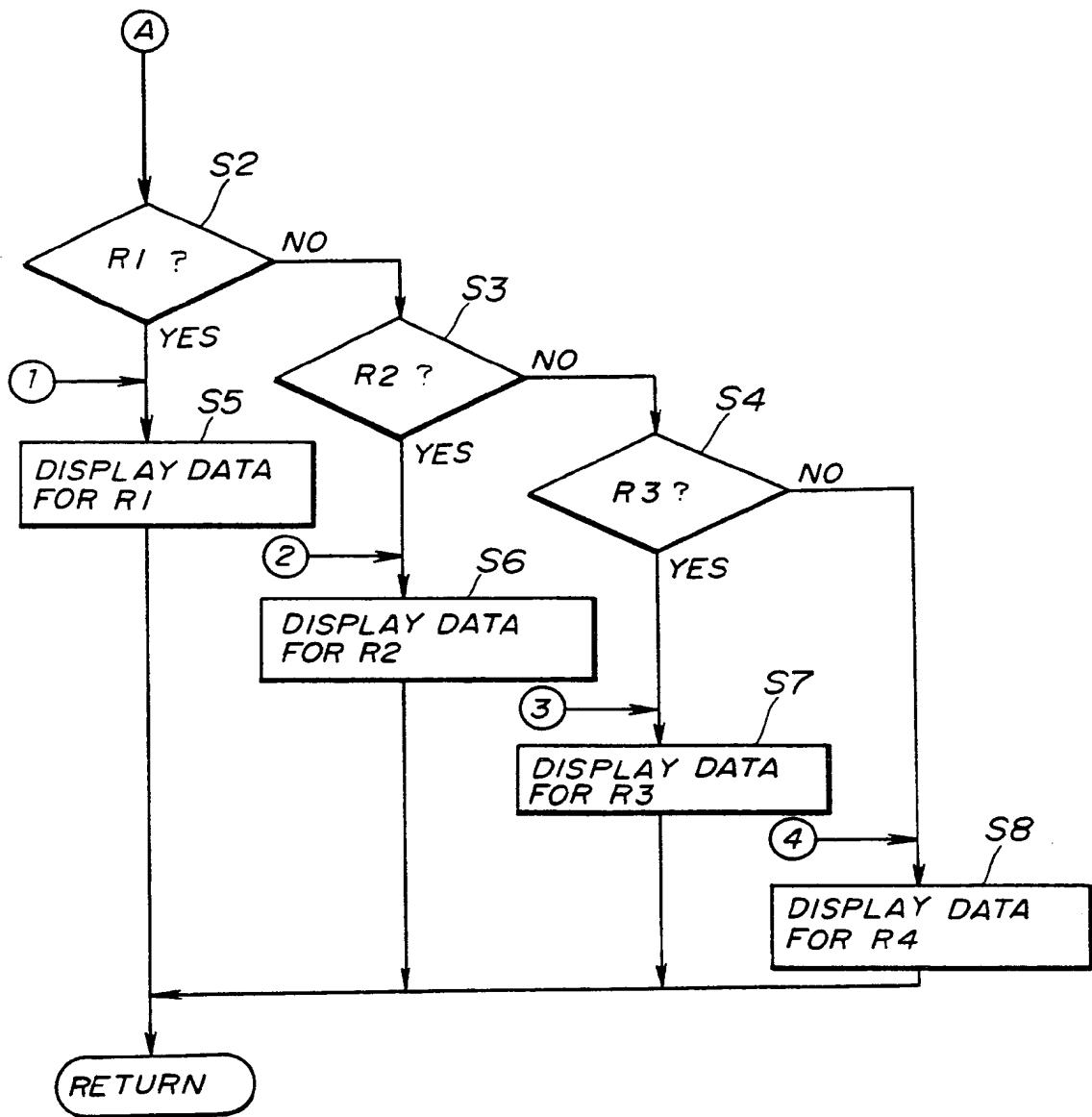


FIG.10A



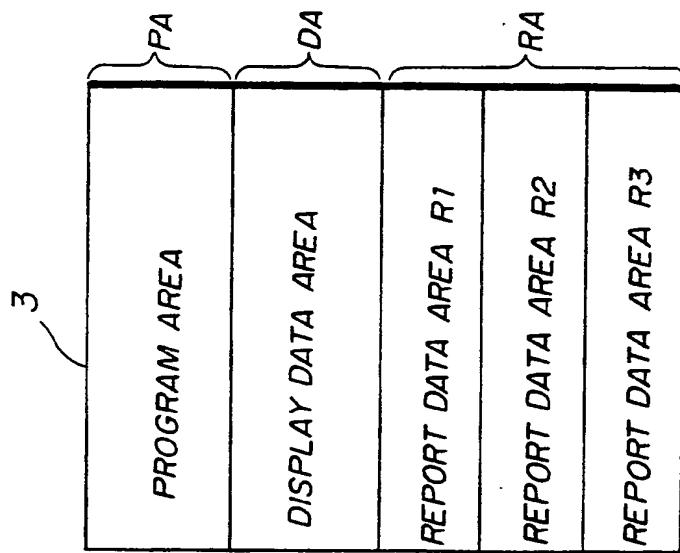
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**FIG.10B**



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FIG. 11



1.

1

"IMAGE FORMING APPARATUS"

5       The present invention generally relates to image forming apparatuses, and more particularly to an image forming apparatus with facilitated language processing which is used for display and/or recording of various information.

10       In facsimile machines, for example, a display or a recording is made to help the user so that a smooth operation is ensured and to indicate the contents of the processing when making a facsimile communication. For example, a guidance for the operator is displayed on a display part. On the other hand, results of communications, information 15       related to the destination and source facsimile machines and the like are recorded on a recording paper. The various information must be displayed or recorded with a language easily understood by the operator. However, the facsimile machines are set up 20       in various countries where different languages are used. For this reason, the language which is used to display or record the various information must be the language used in the region where the facsimile machine is set up.

25       Conventionally, the various information is

1 stored in a memory of the facsimile machine in a  
language which is used in the region where the  
facsimile is set up. Hence, it is possible to  
display or record the various information in the  
5 language appropriate for the region where the  
facsimile machine is set up.

However, each facsimile machine must be  
installed with a memory which stores the various  
information in the language which is used in the  
10 region where the facsimile machine is set up. For  
this reason, the facsimile machines must be produced  
for each of the regions where the facsimile machines  
are set up. In addition, the same information must  
be prepared in many different languages and stored in  
15 the memories which are respectively designed for use  
in the facsimile machines to be set up in various  
regions where different languages are used. As a  
result, there are problems in that it is both  
troublesome and time consuming to prepare the same  
20 information in different languages, the control of  
production becomes complex and the facsimile machines  
become expensive.

On the other hand, when the various  
information is stored in the memory of the facsimile  
25 machine in one language, the facsimile machine can

1 can only display or record the various information in  
this one language. Therefore, the conventional  
facsimile machine is not user-friendly. That is,  
when the operator who is used to operating a  
5 facsimile machine set up in a first region attempts  
to use a facsimile machine set up in a second region  
where the language used is different from that used  
in the first region, the operator cannot understand  
the display or recording output from the facsimile  
10 machine unless the operator understands the language  
used in the second region and the operator may make  
an erroneous operation on the facsimile machine.

15 The above described problems also occur in  
the case of other types of image forming apparatuses  
such as a copying machine and a printer.

It is a general object of the present  
invention to provide a novel and useful image forming  
apparatus in which the problems described above are  
eliminated.

20 According to one aspect of the present  
invention, there is provided an image forming  
apparatus comprising input means for inputting a  
selection data which selects an arbitrary one of a  
plurality of languages, memory means for storing  
25 output data which are written in the plurality of

1       languages and the selection data which is input from  
      said input means, said output data including at least  
      one of guidance information which provides guidance  
      for operating the image forming apparatus and control  
5       information for reporting a state of the image  
      forming apparatus, output means including display  
      means for displaying data and recording means for  
      recording data on a recording paper, and control  
      means coupled to said input means, said memory means  
10      and said output means for controlling operation  
      timings of the image forming apparatus, said control  
      means controlling said output means to output the  
      output data which is stored in said memory means and  
      is written in one of the plurality of languages  
15      selected by the selection data which is stored in  
      said memory means using at least one of said display  
      means and said recording means. According to the  
      image forming apparatus of the present invention, the  
      same image forming apparatus can be set up and used  
20      in different regions where different languages are  
      used because the necessary display or recording can  
      be made in the language which is appropriate for the  
      region where the image forming apparatus is set up.  
      As a result, it is possible to produce image forming  
25      apparatuses which are user-friendly. Further, the

1 control of production is simple and the image forming apparatus can be produced at a low cost.

According to another aspect of the present invention, there is provided an image forming apparatus having first and second modes comprising input means including means for inputting a first selection data which selects an arbitrary one of a plurality of languages and means for inputting a second selection data which selects an arbitrary one of the plurality of languages different from that selected by the first selection data, memory means for storing output data which are written in the plurality of languages and the first and second selection data which are input from said input means, said output data including at least one of guidance information which provides guidance for operating the image forming apparatus and control information for reporting a state of the image forming apparatus, output means including display means for displaying data and recording means for recording data on a recording paper, and control means coupled to said input means, said memory means and said output means for controlling operation timings of an image forming operation of the image forming apparatus and for automatically setting a mode of the image forming

1       apparatus to the second mode when the second  
selection data is input from said input means, said  
control means controlling said output means to output  
the output data which is stored in said memory means  
and is written in one of the plurality of languages  
5       selected by the first selection data which is stored  
in said memory means using at least one of said  
display means and said recording means in the first  
mode, said control means controlling said output  
means to output the output data which is stored in  
10      said memory means and is written in one of the  
plurality of languages selected by the second  
selection data which is stored in said memory means  
using at least one of said display means and said  
recording means in the second mode and automatically  
15      returning the mode to the first mode after one image  
forming operation of the image forming apparatus ends.

20       Other objects and further features of the  
present invention will be apparent from the following  
detailed description when read in conjunction with  
the accompanying drawings.

FIG.1 is a system block diagram showing a  
first embodiment of an image forming apparatus  
according to the present invention;

25       FIG.2 shows memory areas of a ROM of the

1       first embodiment;

FIGS.3A and 3B respectively show a region code area within a RAM of the first embodiment and a region code which is set in the region code area;

5       FIG.4 shows an embodiment of an operation panel of the first embodiment;

FIG.5 is a flow chart for explaining a language process of a CPU of the first embodiment;

10       FIGS.6A and 6B show displays made on a display part of the operation panel of the first embodiment;

FIG.7 shows memory areas of a RAM of a second embodiment of the image forming apparatus according to the present invention;

15       FIGS.8A and 8B respectively show a language selection code area within the RAM of the second embodiment and a language selection code which is set in the language selection code area;

20       FIG.9 shows an embodiment of an operation panel of the second embodiment;

FIG.10 is a flow chart for explaining a language process of a CPU of the second embodiment; and

25       FIG.11 shows memory areas of a ROM of a modification of the second embodiment of the image

1 forming apparatus according to the present invention.

First, a description will be given of a  
first embodiment of an image forming apparatus  
according to the present invention, by referring to  
5 FIGS.1 through 6. In this embodiment, the present  
invention is applied to a facsimile machine.

FIG.1 generally shows the first  
embodiment. A facsimile machine 1 shown in FIG.1  
includes a central processing unit (CPU) 2, a read  
10 only memory (ROM) 3, a random access memory (RAM) 4,  
a scanner unit 5, a data compression and  
reconstruction (DCR) unit 6, a plotter unit 7, an  
operation panel 8, an image memory 9, an input/output  
port 10, a network control unit (NCU) 11 and a modem  
15 12 which are connected as shown.

The CPU 2 controls the operation timings of  
each part of the facsimile machine 1 to enable a  
facsimile communication.

As shown in FIG.2, the ROM 3 is sectioned  
20 into a program area PA and a display data area group  
DA. Basis programs for carrying out basic operations  
of the facsimile machine 1 and a language processing  
program which forms an essential part of this  
embodiment are stored in the program area PA. The  
25 display data area group DA is divided into a

1       plurality of display data areas for each of the  
regions where the facsimile machine 1 may be set up.  
In this embodiment, four display data areas for four  
regions R1 through R4 make up the display data area  
5       group DA. Each display data area stores display data  
which are written in a language which is used in a  
corresponding region Ri, where i = 1, ..., 4 in this  
case. The display data stored in each display data  
area includes all data which are displayed on a  
10      display part of the operation panel 8. For example,  
the display data includes guidance information for  
guiding the operator when making a facsimile  
transmission, guidance information for guiding the  
operator when making a facsimile reception and the  
15      like. Accordingly, the display data area group DA of  
the ROM 3 constitutes a memory means which stores  
various information which are written in a plurality  
of languages (four in this case) which are used in  
the regions where the facsimile machine 1 is set up.  
20      The RAM 4 forms a work area, and a region  
code area CA shown in FIG.3A is formed in the RAM 4.  
Regions codes for the four regions R1 through R4  
shown in FIG.3B are set in the region code area CA.  
The region code is used as selection information for  
25      selecting the display data from the display data area

1 DA of the ROM 3 in conformance with the region Ri  
where the facsimile machine 1 is set up. Hence, the  
RAM 4 constitutes a selection memory means for  
storing the selection information (region codes) for  
5 selecting the region (set-up region).

The scanner unit 5 is made up of an image  
sensor unit using charged coupled devices (CCDs), for  
example. The scanner unit 5 scans a document image  
and outputs image data which describes the read  
10 document image.

The DCR unit 6 compresses and reconstructs  
the image data in conformance with a predetermined  
coding/decoding system.

The plotter unit 7 is made up of a thermal  
15 plotter unit using thermal elements, for example.  
The plotter unit 7 may record information directly on  
a thermally sensitive recording paper or indirectly  
on a plain recording paper via an ink sheet.  
Alternatively, the plotter unit 7 may be made up of a  
20 known laser printing unit which uses a laser beam to  
make a print.

FIG.4 shows an embodiment of the operation  
panel 8. The operation panel 8 includes a ten-key  
25 8a, a start key 8b, a stop key 8c, a copy key 8d, a  
display part 8e and the like. The start key 9b is

1        used to instruct the start of a facsimile transmission, the start of a facsimile reception in a manual reception mode, and the start of a copying operation. The stop key 8c is used to instruct the 5 stopping of various operations. The copy key 8d is used to select a copy mode in which a copy print is made using the scanner unit 5 and the plotter unit 5. The display part 8e displays guidance information such as the operating instructions for making 10 facsimile transmission and reception and contents of instructions entered. In other words, the display part 8e displays the display data within the ROM 3 in the language which is selected by the region code area CA of the RAM 4.

15            The image memory 9 has a predetermined memory capacity for storing image data which are transmitted and received.

20            The NCU 11 is connected to a line L and makes an automatic calling process and an automatic answering process. In addition, the NCU 11 exchanges facsimile control signals with another facsimile machine to carry out a facsimile control procedure.

25            The modem 12 modulates a signal which is to be transmitted on the line L and demodulates a signal which is received from the line L.

1                   In a facsimile transmission mode, the  
facsimile machine 1 reads the document which is set  
on a document setting part (not shown) by the scanner  
unit 5. The image data output from the scanner unit  
5 is coded in the DCR unit 6 and the coded image data  
is modulated in the modem 12. The modulated data is  
transmitted on the line L via the NCU 11.

10                  On the other hand, in a facsimile reception  
mode, the facsimile machine 1 demodulates the  
modulated image data which is received from the line  
L in the modem 12. The demodulated image data is  
decoded in the DCR unit 6. The decoded image data is  
supplied to the plotter unit 7 and recorded on a  
recording paper.

15                  Next, a description will be given of a  
language processing which is carried out in the CPU 2  
when displaying or recording various information in  
an arbitrary language. FIG.5 is a flow chart showing  
the language processing of the CPU 2.

20                  The facsimile machine 1 displays various  
guidance information on the display part 8e of the  
operation panel 8 in a standby mode, a facsimile  
transmission mode and a facsimile reception mode.  
The guidance information should be displayed in the  
language the operator can understand.

1                   In this embodiment, the display data are  
written in languages which may be used in the region  
where the facsimile machine 1 is set up, and the  
display data in the different languages are prestored  
5                   in the display data area group DA within the ROM 3.  
When the facsimile machine 1 is set up, the  
serviceman or the operator sets the region code in  
the region code area CA within the RAM 4 by  
manipulating appropriate keys of the operation panel  
10                  8, for example. The display data which are written  
in the different languages and independently stored  
in the respective display data areas within the ROM 3  
are read out depending on the region code which is  
set in the region code area CA within the RAM 4, and  
15                  the display data in the language appropriate for the  
region is displayed on the display part 8e.

That is, the display data for the regions  
R1 through R4 are stored in the display data area  
group DA within the ROM 3 and one of the region codes  
20                  corresponding to the regions R1 through R4 and shown  
in FIG.3B is set as the region code. When displaying  
the display data on the display part 8e, the CPU 2 of  
the facsimile machine 1 starts the process shown in  
FIG.5.

25                  A step S1 shown in FIG.5 reads the region

1 code from the region code area CA of the RAM 4. A  
2 step S2 discriminates whether or not the read region  
3 code indicates the region R1. When the  
4 discrimination result in the step S2 is NO, a step S3  
5 discriminates whether or not the read region code  
6 indicates the region R2. When the discrimination  
7 result in the step S3 is NO, a step S4 discriminates  
8 whether or not the read region code indicates the  
9 region R3. Hence, the steps S2 through S4 check the  
10 region which is indicated by the read region code.

When the discrimination result in the step  
15 S2 is YES, a step S5 reads from the display data area  
group DA within the ROM 3 the display data  
corresponding to the read region code, that is, the  
region R1, and displays the read out display data on  
the display part 8e. When the discrimination result  
in the step S3 is YES, a step S6 reads from the  
display data area group DA within the ROM 3 the  
display data corresponding to the read region code,  
that is, the region R2, and displays the read out  
display data on the display part 8e. In addition,  
when the discrimination result in the step S4 is YES,  
a step S7 reads from the display data area group DA  
within the ROM 3 the display data corresponding to  
the read region code, that is, the region R3, and

1 displays the read out display data on the display part 8e. On the other hand, when the discrimination result in the step S4 is NO, a step S8 reads from the display data area group DA within the ROM 3 the display data corresponding to the read region code, that is, the region R4, and displays the read out display data on the display part 8e.

For example, when displaying the guidance information (display data) in the standby mode, a 10 guidance in English is displayed on the display part 8e as shown in FIG.6A when the region code indicates England. On the other hand, a guidance in German is displayed on the display part 8e as shown in FIG.6B when the region code indicates Germany. Accordingly, 15 it is possible to display the display data in the language appropriate for the region where the facsimile machine 1 is set up by merely setting the region code in the region code area CA within the RAM 4. There is no need to produce the facsimile 20 machines 1 exclusively for the different regions. As a result, the design and production can be controlled with ease, thereby improving the production efficiency and reducing the cost of the facsimile machines 1.

25 Next, a description will be given of a

1 second embodiment of the image forming apparatus  
according to the present invention, by referring to  
FIGS.7 through 11. In this embodiment, the present  
invention is also applied to a facsimile machine  
5 which has a structure identical to that of the first  
embodiment shown in FIG.1, and a description of the  
block system will be omitted. In this embodiment,  
the serviceman fixedly sets the language for the  
region where the facsimile machine is set up, and the  
operator can designate an arbitrary language. When  
10 the sequence of facsimile processes are completed in  
the language which is designated by the operator, the  
language is automatically returned to the language  
which is fixedly set by the serviceman. Of course,  
15 the operator may fixedly set the language for the  
region where the facsimile machine is set up in place  
of the serviceman.

20 In this embodiment, the basic programs of  
the facsimile machine 1 and the language processing  
program are stored in the program area PA of the ROM  
3, and the display data written in the languages  
appropriate for the regions where the facsimile  
machine 1 is set up are stored in the display data  
area group DA of the ROM 3 as described in  
25 conjunction with FIG.2.

1                   On the other hand, the region code area CA  
is formed in a serviceman area SA of the RAM 4 and a  
language selection code area LA is formed in a user  
area UA of the RAM as shown in FIG.7. Similarly as  
5                   in the case of the first embodiment, when setting up  
the facsimile machine 1, the serviceman sets in the  
region code area CA the region code which is in  
accordance with the region where the facsimile  
machine 1 is set up. Normally, the CPU 2 sets in the  
10                  language selection code area LA a language selection  
code the content of which is identical to that of the  
region code set in the region code area CA. But when  
the operator selects an arbitrary language from the  
key of the operation panel 8 when operating the  
15                  facsimile machine 1, a language selection code  
(language instruction information) corresponding to  
the selected arbitrary language is set in the  
language selection code area LA.

As shown in FIG.8A, the language selection  
20                  area LA has 8 bits, similarly to the region code area  
CA. In addition, the language selection code which  
is set in the language selection code area LA is  
given a code which corresponds to one region as shown  
in FIG.8B. For example, language selection codes  
25                  LANG1 through LANG4 respectively correspond to the

1 regions R1 through R4. Accordingly, the language  
selection code area LA forms a language instruction  
memory which stores the language instruction  
information for arbitrarily selecting the output  
5 language.

FIG.9 shows an embodiment of the operation  
panel 8 of the second embodiment. In FIG.9, those  
parts which are the same as those corresponding parts  
in FIG.4 are designated by the same reference  
10 numerals, and a description thereof will be omitted.  
As shown in FIG.9, a language selection key 8f is  
provided in addition to the keys 8a through 8d and  
the display part 8e. The language selection key 8f  
15 is manipulated when selecting a language selection  
mode.

For the sake of convenience, it is assumed  
that display data for the four regions R1 through R4  
are stored in the display data area group DA of the  
ROM 3, and one of the four region codes shown in  
FIG.3B and corresponding to the region where the  
20 facsimile machine 1 is set up is set in the region  
code area CA of the RAM 4 by the serviceman. When  
the region code is set by the serviceman, the CPU 2  
sets in the language selection code area LA a  
25 language selection code the content of which is

1 identical to that of the region code set in the  
region code area CA.

Next, a description will be given of the  
operation of the CPU 2 in this embodiment, by  
5 referring to FIG.10. In FIG.10, those steps which  
are the same as those corresponding steps in FIG.5  
are designated by the same reference numerals, and a  
description thereof will be omitted. When displaying  
guidance information on the display part 8e of the  
10 facsimile machine 1, a step P1 discriminates whether  
or not the content of the language selection code  
area LA is unchanged. In other words, the step P1  
discriminates whether or not the content of the  
language selection code area LA is the same as the  
15 content of the region code area CA. When the  
language selection code and the region code are the  
same and the discrimination result in the step P1 is  
YES, a step P2 resets a communication end flag CEF  
and turns OFF a language switch flag LSF. A step P3  
20 reads the content of the region code area CA and  
stores the read content into the language selection  
code area LA. The communication end flag CEF is  
stored in a predetermined region of the RAM 4 and is  
set every time one communication ends. In addition,  
25 the language switch flag LSF is similarly stored in a

1 predetermined region of the RAM 4. The language  
switch flag LSF is set when the language selection  
code in the language selection code area LA is  
switched to a code different from the region code in  
5 the region code area CA.

After the step P3, the process is the same  
as in the first embodiment as described in  
conjunction with FIG.5. In other words, the steps S2  
through S4 checks which one of the regions R1 through  
10 R4 is indicated by the region code. In addition, the  
steps S5 through S8 read the display data for the  
region indicated by the region code and displays the  
read display data on the display part 8e.

On the other hand, when the discrimination  
15 result in the step P1 is NO, a step P11 discriminates  
whether or not the communication end flag CEF is  
set. When one communication is ended and the  
discrimination result in the step P11 is YES, a step  
P12 discriminates whether or not the language switch  
20 flag LSF is set, that is, whether or not the language  
is switched by the operator. When the discrimination  
result in the step P12 is YES, the display is made in  
the language selected by the operator and it is  
discriminated that the facsimile communication in  
25 accordance with the display in the selected language

1       is completed, and the process advances to the step  
P2. The step P2 resets the communication end flag  
CEF and turns OFF the language switch flag LSF to  
return the facsimile machine 1 to the initial state.  
5       Accordingly, the region code stored in the region  
code area CA is stored in the language selection code  
area LA, and the display part 8e displays the display  
data which is in the language appropriate for one of  
the regions R1 through R4 selected by the region code.

10           On the other hand, when the discrimination  
result in the step P11 or P12 is NO, it is  
discriminated that the communication process in the  
language selected by the operator is not completed or  
one communication process is completed but a language  
15       selection is made again. In this case, a step P13  
turns ON the language switch flag LSF and resets the  
communication end flag CEF. Then, a step P14  
discriminates whether or not the language selection  
code in the language selection code area LA  
20       corresponds to the region code of the region R1.  
When the discrimination result in the step P14 is NO,  
a step P15 discriminates whether or not the language  
selection code in the language selection code area LA  
corresponds to the region code of the region R2.  
25       When the discrimination result in the step P15 is NO,

1 a step P16 discriminates whether or not the language  
selection code in the language selection code area LA  
corresponds to the region code of the region R3. In  
other words, the steps P14 through P16 check which  
5 one of region codes of the regions R1 through R4 the  
language selection code in the language selection  
code area LA corresponds.

The process advances to the step S5 when  
the discrimination result in the step P14 is YES.  
10 The process advances to the step S6 when the  
discrimination result in the step P15 is YES. The  
process advances to the step S7 when the  
discrimination result in the step P16 is YES. On the  
other hand, the process advances to the step S8 when  
15 the discrimination result in the step P16 is NO. As  
a result, the display data which is written in the  
language appropriate for the region which corresponds  
to the language selection code in the language  
selection code area LA is read from the ROM 3 and  
20 displayed on the display part 8e.

Accordingly, even when the operator goes to  
a region where the language used is different from  
the mother tongue of the operator and the operator  
operates the facsimile machine 1, the operator can  
25 select the language the operator is able to

1 understand and receive the necessary guidance which  
is displayed on the display part 8e in the selected  
language. For this reason, the facsimile machine 1  
is extremely user-friendly.

5 In addition, when the series of  
communication processes are completed in the language  
which is selected by the operator, the facsimile  
machine 1 is automatically returned to the initial  
state so that the display data is thereafter  
10 displayed on the display part 8e in the language  
which is set by the serviceman and is appropriate for  
the region where the facsimile machine 1 is set.  
Hence, there is no need to manually return the  
facsimile machine 1 to the initial state so that the  
15 display data is thereafter displayed on the display  
part 8e in the language which is appropriate for the  
region where the facsimile machine 1 is set.  
Therefore, the facsimile machine 1 is very easy to  
operate because the operator can select the desired  
20 language in which the guidance is to be displayed on  
the display part 8e.

In the described embodiments, the present  
invention is applied to the facsimile machine.  
However, the present invention is similarly  
25 applicable to any types of image forming apparatuses

1 such as a copying machine and a printer.

The information which is output from the facsimile machine 1 in the selected language need not necessarily be displayed on the display part 8e, and 5 may be output in a desired form. In addition, the information which is output in the selected language is not limited to the guidance information which provides guidance for operating the facsimile machine 1. For example, the information which is output in 10 the selected language may include control information for reporting the state of the facsimile machine 1 such as results of transmissions and receptions, information related to the destination and source facsimile machines and the like. Such information 15 may be recorded on the plotter unit 7 instead of being displayed on the display part 8e.

In a modification of the second embodiment, a report data area group RA is provided in the ROM 3 in addition to the program area PA and the display data area group DA as shown in FIG.11. A report such as the results of transmissions and receptions is 20 written in a desired language and stored in a corresponding report data area of the report data area group RA as a report data. The report data in 25 the report data area of the ROM 3 is read and

1 recorded on the recording paper by the plotter unit 7.

5 In the described embodiments, it is of course possible to use a single memory means and use two independent memory locations thereof as the first and second memory means. That is, a single memory device may be used as the ROM 3 and the RAM 4.

10 Further, the present invention is not limited to these embodiments, but various variations and modifications may be made without departing from the scope of the present invention.

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**WHAT WE CLAIM IS:**

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1. An image forming apparatus comprising:  
input means for inputting a selection data which  
selects an arbitrary one of a plurality of languages;  
memory means for storing output data which are  
written in the plurality of languages and the  
selection data which is input from said input means,  
said output data including at least one of guidance  
information which provides guidance for operating the  
image forming apparatus and control information for  
reporting a state of the image forming apparatus;  
output means including display means for  
displaying data and recording means for recording  
data on a recording paper; and  
control means coupled to said input means, said  
memory means and said output means for controlling  
operation timings of the image forming apparatus,  
said control means controlling said output means  
to output the output data which is stored in said  
memory means and is written in one of the plurality  
of languages selected by the selection data which is

1        stored in said memory means using at least one of  
          said display means and said recording means.

5

2.    The image forming apparatus as claimed  
      in claim 1 wherein said memory means includes a read  
      only memory for storing the output data and programs  
10      for controlling the operation timings of the image  
      forming apparatus.

15

3.    The image forming apparatus as claimed  
      in claim 1 wherein said memory means includes a  
      random access memory for storing the selection data  
      which is input from said input means.

20

4.    The image forming apparatus as claimed  
25      in claim 1 wherein said output data include display

1 data which are related to the guidance information  
and are written in the plurality of languages, and  
said control means controls said output means to  
display the display data on said display means in one  
5 of the plurality of languages selected by the  
selection data which is stored in said memory means.

10

5. The image forming apparatus as claimed  
in claim 1 wherein said output data include report  
data which are related to the control information and  
are written in the plurality of languages, and said  
control means controls said output means to record  
15 the report data on the recording paper by said  
recording means in one of the plurality of languages  
selected by the selection data which is stored in  
said memory means.

20

6. The image forming apparatus as claimed  
25 in claim 1 which further comprises means coupled to

1        said control means for carrying out a facsimile communication, so that the image forming apparatus is usable as a facsimile machine.

5

7. An image forming apparatus having first and second modes comprising:

10        input means including means for inputting a first selection data which selects an arbitrary one of a plurality of languages and means for inputting a second selection data which selects an arbitrary one of the plurality of languages different from that selected by the first selection data;

15        memory means for storing output data which are written in the plurality of languages and the first and second selection data which are input from said input means, said output data including at least one of guidance information which provides guidance for operating the image forming apparatus and control information for reporting a state of the image forming apparatus;

20        output means including display means for displaying data and recording means for recording

1 data on a recording paper; and  
control means coupled to said input means, said  
memory means and said output means for controlling  
operation timings of an image forming operation of  
5 the image forming apparatus and for automatically  
setting a mode of the image forming apparatus to the  
second mode when the second selection data is input  
from said input means,  
said control means controlling said output means  
10 to output the output data which is stored in said  
memory means and is written in one of the plurality  
of languages selected by the first selection data  
which is stored in said memory means using at least  
one of said display means and said recording means in  
15 the first mode,  
said control means controlling said output means  
to output the output data which is stored in said  
memory means and is written in one of the plurality  
of languages selected by the second selection data  
which is stored in said memory means using at least  
one of said display means and said recording means in  
20 the second mode and automatically returning the mode  
to the first mode after one image forming operation  
of the image forming apparatus ends.

1                   8. The image forming apparatus as claimed  
in claim 7 wherein said memory means includes a read  
only memory for storing the output data and programs  
for controlling the operation timings of the image  
5                   forming apparatus.

10                  9. The image forming apparatus as claimed  
in claim 7 wherein said memory means includes a  
random access memory for storing the first and second  
selection data which are input from said input means.

15

20                  10. The image forming apparatus as claimed  
in claim 7 wherein said output data include display  
data which are related to the guidance information  
and are written in the plurality of languages, and  
said control means controls said output means to  
display the display data on said display means in one  
of the plurality of languages selected by the first  
25                  selection data which is stored in said memory means

1       in the first mode and selected by the second  
selection data which is stored in said memory means  
in the second mode.

5

11. The image forming apparatus as claimed  
in claim 7 wherein said output data include report  
10      data which are related to the control information and  
are written in the plurality of languages, and said  
control means controls said output means to record  
the report data on the recording paper by said  
recording means in one of the plurality of languages  
15      selected by the first selection data which is stored  
in said memory means in the first mode and selected  
by the second selection data which is stored in said  
memory means in the second mode.

20

12. The image forming apparatus as claimed  
in claim 7 which further comprises means coupled to  
25      said control means for carrying out a facsimile

1 communication, so that the image forming apparatus is  
usable as a facsimile machine.

5

13. An image forming apparatus  
substantially as hereinbefore described with  
reference to and as illustrated in the accompanying  
10 drawings.

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